Specifications of oceanographic sensors used for long-term observations in Massachusetts Bay			
Parameter	**Sensor**	**Manufacturer's Specification**	**Comments**
Temperature	Sea-Bird Temperature Probe (SBE-3 (incorporated on bottom tripod system)) www.seabird.com	Range: -5 to 35°C Accuracy: 0.002°C Resolution: 0.0001°C	
Mean current (single point)	Woods Hole Oceanographic Vector Measuring Current Meter[1] (VMCM)	Detection Threshold: 0.9 cm/s Propeller Sensitivity: 2.67 rev/m of flow Cosine Response: ±1 % Compass Accuracy: < 5° Accurate when tilted < 15°	Good for measuring mean flows in wave environments. Biofouling can obstruct mechanical propellers.
Mean current (profile)	RD Instruments 300 kHz Workhorse Acoustic Doppler Profiler (ADCP) www.rdinstruments.com	Profiling Range: 2-99 m Depth Cell Size: 2 m Velocity Range: ±5 m/s Accuracy as operated: 0.4 cm/s Compass Accuracy: ±2° Tilt Accuracy: ±0.5°	As operated for these measurements
Near-bottom current	Oceanographic Instrument Systems Benthic Acoustic Stress Sensor (BASS)[2]	Range: 0-120 cm/s Resolution: 0.03 cm/s Accuracy: 0.3 cm/s Cosine Response: 5% ±20° horiz. Tilt Accuracy: 0.1° Compass Accuracy: 0.5°	Current measurement accuracy depends on zero-calibration; 0.3 cm/s was reliably achieved using dock calibrations.
Conductivity (for salinity[3])	Sea-Bird Conductivity Cell (SBE-04 (cell incorporated on bottom tripod), SBE 16 (Seacat) or SBE-37 (Microcat)) www.seabird.com	Range: 0-7 S/m Accuracy: 0.0003 S/m Resolution: 0.00001 S/m	Sensitive to biofouling and sediment in cell, especially when on a stable platform. Flushing cell reduces sediment buildup.
Light transmission	Sea Tech[4] Transmissometer	Path Length: 25 cm Wave Length: 660 nm red LED Accuracy: +/- 0.05% Sensitivity: 0.4 mg/l per 0.1% decrease	Signal often degraded due to biofouling, especially near-surface.
Pressure	Paroscientific Digiquartz	Range: 0-130 m Using a period sampling method: Resolution: 0.57 mm Repeatability: 0.005% full scale	

1) No longer commercially available.
2) Contact Albert Williams III, Woods Hole Oceanographic Institution.
3) Salinity is calculated from conductivity, temperature, and pressure.
4) Sea Tech is no longer in business.
Contact manufacturer directly for more detail. Use of manufacturer's names is for descriptive purposes only and does not constitute endorsement by the U.S. Geological Survey.